

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

July 20, 2007

Ms. Natasha Moiseyev
4550 San Pablo LLC/Peter and Leslie Matthew Trust
1450 El Camino Avenue
Menlo Park, CA 94025

Subject: SLIC Case RO0002929 and Geotracker Global ID T06019729698, San Pablo LLC, 4550 San Pablo Avenue, Emeryville, CA 94608

Dear Ms. Moiseyev:

This letter confirms the completion of site investigation and remedial actions for the soil and groundwater investigation at the above referenced site. We are also transmitting the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported releases at the subject site with the provision that the information provided to this agency was accurate and representative of existing conditions. The subject Spill, Leaks, Investigation, and Cleanup (SLIC) case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Residual concentrations of up to 1,300 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons as diesel remain in soil at the site.
- Residual concentrations of up to 1,275 micrograms per liter ($\mu\text{g/L}$) of total petroleum hydrocarbons as gasoline remain in groundwater at the site.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely

Donna L. Drogos, P.E.
LOP and SLIC Program Manager

Enclosures: SLIC Case Closure Summary

Ms. Natasha Moiseyev
RO0002929
July 20, 2007
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cc: Ms. Cherie McCaulou (w/enc.)
SF- Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Mr. Ignacio Dayrit (w/enc.)
City of Emeryville
1333 Park Avenue
Emeryville, CA 94608-3517

Tom McKeithen (w/enc.)
Garlock & Co.
1450 El Camino Avenue
Menlo Park, CA 94025

Benjamin Berman (w/enc.)
E2C, Inc.
382 Martin Avenue
Santa Clara, CA 95050-3112

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

**CASE CLOSURE SUMMARY
SPILLS, LEAKS, INVESTIGATION, AND CLEANUP PROGRAM**

I. AGENCY INFORMATION

Date: May 17, 2007

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Jerry Wickham	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: San Pablo LLC		
Site Facility Address: 4550 San Pablo Avenue, Emeryville, CA 94608		
RB Case No.: ---	Local Case ID: ---	LOP Case No.: RO0002929
URF Filing Date: 09/11/1998	Geotracker ID: T06019729698	APN: 49-1174-31-3

Responsible Parties	Addresses	Phone Numbers
4550 San Pablo LLC and Peter and Leslie Matthews Trust c/o Natasha Moiseyev	1450 El Camino Avenue, Menlo Park, CA 94025	510-265-8600

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	10,000 gallons	Diesel	Removed	09/11/1988
2	10,000 gallons	Gasoline	Removed	09/11/1988
3	2,000 gallons	Fuel Oil	Removed	2/4/1999
Piping			Removed	09/11/1998

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown. No holes, cracks, or other signs of failure were observed in the tanks during removal.	
Site characterization complete? Yes	Date Approved By Oversight Agency: ----

Monitoring wells installed? Yes	Number: 2	Proper screened interval? --
Highest GW Depth Below Ground Surface: 4 feet	Lowest Depth: 8 ft.	Flow Direction: West Northwest
Most Sensitive Current Use: Potential Drinking water source.		

Summary of Production Wells in Vicinity: Based on well survey information from adjacent site at 4343 San Pablo Avenue, no water supply wells are within ½ mile of the site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: San Francisco Bay 3,200 feet to west
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	Two - 10,000 gallon tanks	Transported to Erickson, Inc., Richmond, CA for disposal	09/11/1998
	One - 2,000 gallon tank	Transported to Erickson, Inc., Richmond, CA for disposal	2/4/1999
Piping	150 feet	Transported to Erickson, Inc., Richmond, CA for disposal	09/11/1998
Free Product	200 gallons of water with oil sheen	Transported to Alviso Independent, Inc, in Alviso, CA for disposal	09/10/1988
Soil	1,152 cubic yards	Transported to Forward Landfill in Manteca, CA for disposal	9/25/1998 through 10/23/1998
Groundwater	33,000 gallons	Transported to Seaport Environmental, Inc. in Redwood City, CA for disposal	10/1/1998

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
 (Please see Attachments 1 through 6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	22	<0.1	1,275	1,275
TPH (Diesel)	6,700	1,300	447,000(1)	8,450(1)
TPH (Motor Oil)	120	120	<10	<10
Oil and Grease	NA	NA	NA	NA
Benzene	2.1	<0.005	42	42
Toluene	1.3	<0.005	132	132
Ethylbenzene	0.77	<0.005	40	40
Xylenes	3.7	<0.005	199	199
Heavy Metals	110(2)	110(2)	NA	NA
MTBE	<0.1	<0.1	180(3)	180(3)
Other (8240/8270)	0.34(4)	0.34(4)	13(5)	13(5)

- (1) The maximum concentration before cleanup of 447,000 ppb of TPHd was detected during the initial sampling of well MW-1 on March 4, 1998. The maximum concentration after cleanup is from the most recent groundwater sampling event on December 13, 2000.
- (2) Total lead; all other metals were within range of ambient concentrations.
- (3) Maximum MTBE concentration by EPA Method 8020 was 180 ppb. Maximum MTBE concentration confirmed by EPA Method 8260 was 70 ppb. No other fuel oxygenates analyzed. 1,2-dichloroethane was <0.5 ppb.
- (4) Phenol; no other VOCs, SVOCs, ammonia, or PCBs detected in soil.
- (5) Bis(2-ethylhexyl)phthalate detected at 13 ppb; 1,2,4-trimethylbenzene detected at 2.2 ppb; 1,3,5-trimethylbenzene detected at 2.0 ppb; fluorene detected at 12 ppb; phenanthrene detected at 13 ppb; and pyrene detected at 5.5 ppb; no other VOCs or SVOCs detected in groundwater.

Site History and Description of Corrective Actions:

The site operated as a dairy facility from approximately 1946 to December 1997. Currently, a two-story building occupies the northwestern portion of the property and the remainder of the site is paved. One 10,000-gallon gasoline underground storage tank (UST) and one 10,000-gallon diesel UST were removed from the site in September 1998. Although no holes were observed in the USTs, obvious contamination was observed in soil and groundwater in the tank excavation. Soil samples collected from the tank pit on September 14, 1998 contained up to 6,700 milligrams per kilogram (MG/kg) of total petroleum hydrocarbons as diesel (TPHd). TPHg was detected in only one of 7 soil samples at a concentration of 2.1 mg/kg. Approximately 1,152 cubic yards of soil were overexcavated from the north, south, and west sidewalls of the tank excavation in September 1998. The soils were disposed off-site at the Forward Landfill in Manteca, CA. Soil was also excavated along the former product piping trenches and the former dispenser island area. Confirmation soil samples collected from the tank pit on September 25, 1998 contained 59 to 770 mg/kg of TPHd. Confirmation soil samples collected from the product piping trenches did not contain TPHd or TPHg at detectable concentrations.

Two monitoring wells were installed on site in March 1999. Well MW-1 was located in the source area within 5 feet of the former tank excavation. Well MW-2 was located approximately 130 feet west northwest (downgradient) of the former tank excavation. Three off-site monitoring wells were installed downgradient of the site on the former Berkeley Farms truck maintenance facility and yard to the west across San Pablo Avenue. Two of the three off-site monitoring wells provide data for leaking fuel case RO000245, which addresses a former waste oil tank at the former Berkeley Farms truck maintenance facility at 4575 San Pablo Avenue. The third off-site monitoring well provides data for leaking fuel case RO0002452 to address former fuel tanks at 4501 San Pablo Avenue. The on-site and off-site monitoring wells were sampled quarterly from March 1999 to December 2000. During the December 2000 groundwater monitoring event, TPHg and benzene were detected in groundwater from the source area well (MW-1) at concentrations of 1,275 and 42 ppb, respectively. Within the downgradient portion of the plume (MW-2), the concentrations of TPHg and benzene in groundwater decreased to 322 and 10 ppb, respectively. During the December 2000 groundwater monitoring event, TPHd was detected in groundwater at a concentration of 8,450 ppb in the source area well (MW-1) and 188 ppb in the downgradient well (MW-2). The two on-site monitoring wells were decommissioned in July 2001.

A Supplemental Site Investigation, consisting of sampling and analysis of six soil borings, was conducted at the site in December 1999 to investigate the potential for contamination from chemicals other than fuels that were used in the dairy operations. No VOCs, BTEX, TPHg, ammonia, nitrate, nitrite, or PCBs were detected in the soil samples. Phenol was the only SVOC detected at a concentration of 0.34 mg/kg. Lead was the only metal detected at a concentration above ambient levels at a concentration of 110 mg/kg in one soil sample.

A 2,000-gallon fuel oil tank was removed on February 4, 1999. Two soil samples were collected from the north and south sidewalls of the tank excavation. Fuel hydrocarbons were not detected in the soil samples and no further excavation was considered warranted.

A previous fuel leak case for this site (RO0000248 at 4550 San Pablo Avenue) was closed by ACEH on April 6, 2006. The site was closed with a site management requirement that the case be re-evaluated if the land use changed from the current commercial use due to residual petroleum contamination in soil and groundwater. In correspondence dated May 23, 2006, 4550 San Pablo LLC requested that the site be re-evaluated for unrestricted use. In order to assess the potential for vapor intrusion into future residential buildings, soil vapor sampling was conducted at 14 locations in January 2007. Volatile organic compounds were not detected in any of the soil vapor samples.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? --		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? --		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: Site is suitable for unrestricted use. If excavation is undertaken to depths exceeding three feet in the area of the former underground storage tanks or downgradient of the former gasoline and diesel USTs, excavated soils and/or extracted groundwater are to be properly sampled and analyzed prior to disposal. Soil analysis and disposal requirements are to be identified in a construction soils management plan to protect construction workers.		
Should corrective action be reviewed if land use changes? No		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: Yes	Number Decommissioned: 2	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

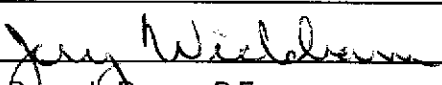
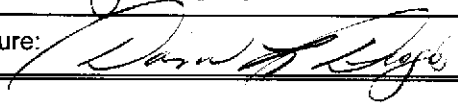
TAME, ETBE, DIPE, TBA, and EDC were not analyzed.

Residual TPH as gasoline and TPH as diesel remain in shallow groundwater at concentrations exceeding ESLs in the area of the former USTs and a limited area downgradient from the former gasoline and diesel USTs. However, based on the low concentrations of aromatic fuel hydrocarbons and limited extent of the plume, degradation of fuel hydrocarbons appears to be occurring. Therefore, TPH concentrations in soil and groundwater and the size of the plume are expected to decrease over time due to natural attenuation processes.

Conclusion:

Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available in our files to date. No further investigation or cleanup is necessary. ACEH staff recommend case closure for this site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Jerry Wickham	Title: Hazardous Materials Specialist
Signature: 	Date: 05/17/07
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 05/21/07

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature: <i>Cherie McCaulou</i>	Date: <i>7/19/07</i>

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: Not requested	Date of Well Decommissioning Report: 8/16/2001	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 2	Number Retained: 0
Reason Wells Retained: --		
Additional requirements for submittal of groundwater data from retained wells: --		
ACEH Concurrence - Signature: <i>Jerry Weichmann</i>	Date: <i>07/19/07</i>	

Attachments:

1. Site Vicinity Map
2. Potentiometric Surface Map (3/12/1999) and Soil Gas Sampling Location Map
3. Sample Location Map (Figure 2); Location of Supplemental Soil Borings (Figure 4); Site Plan (Figure 1)
4. Soil Analytical Data
5. Groundwater Analytical Data
6. Boring Logs
7. Soil Vapor Analytical Data

This document and the related SLIC CASE CLOSURE LETTER shall be retained by the lead agency as part of the official site file.



OAKLAND WEST QUADRANGLE
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 NOTE: N.T.S.

VICINITY MAP (U.S.G.S. BASE)



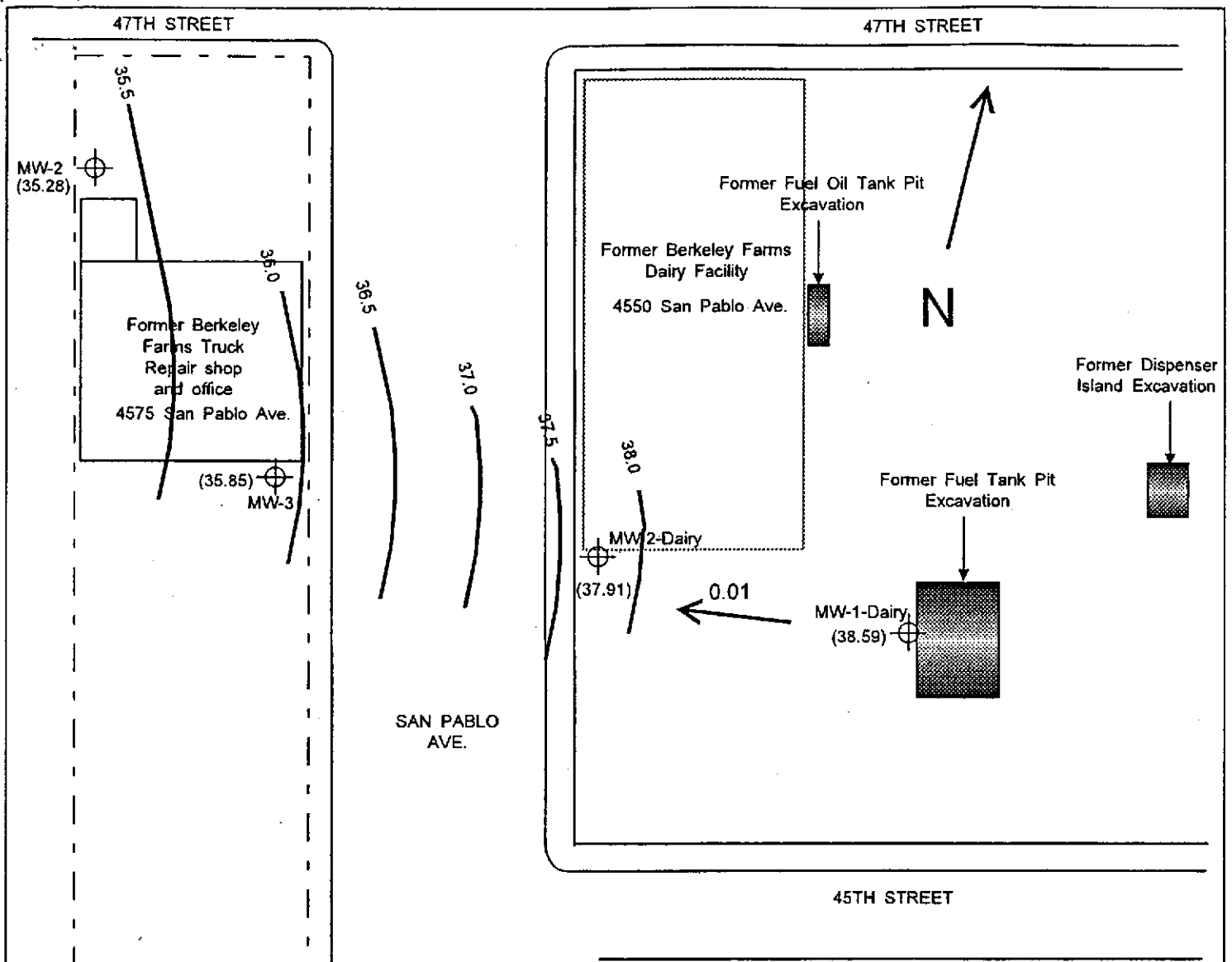
ENVIRONMENTAL /
 ENGINEERING CONSULTANTS
 382 MARTIN AVENUE
 SANTA CLARA, CALIFORNIA 95050-3112
 TEL: 408.327.5700 FAX: 408.327.5707

PHASE II SOIL-GAS SAMPLING REPORT
 4550 SAN PABLO AVE
 EMERYVILLE, CA

FILENAME: 2856SC01
 DATE: FEBRUARY 2007

FIGURE:

ATTACHMENT 1



LEGEND

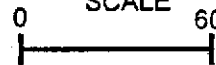
⊕ Monitoring well

NM = Not monitored

(38.0) Ground water elevation in feet above Mean Sea Level on 3/4/99

← 0.01 Direction of ground water flow with approximate hydraulic gradient

APPROXIMATE
SCALE



1" = 60'

Former Berkeley Farms Dairy Facility
4550 San Pablo Avenue
Emeryville, California

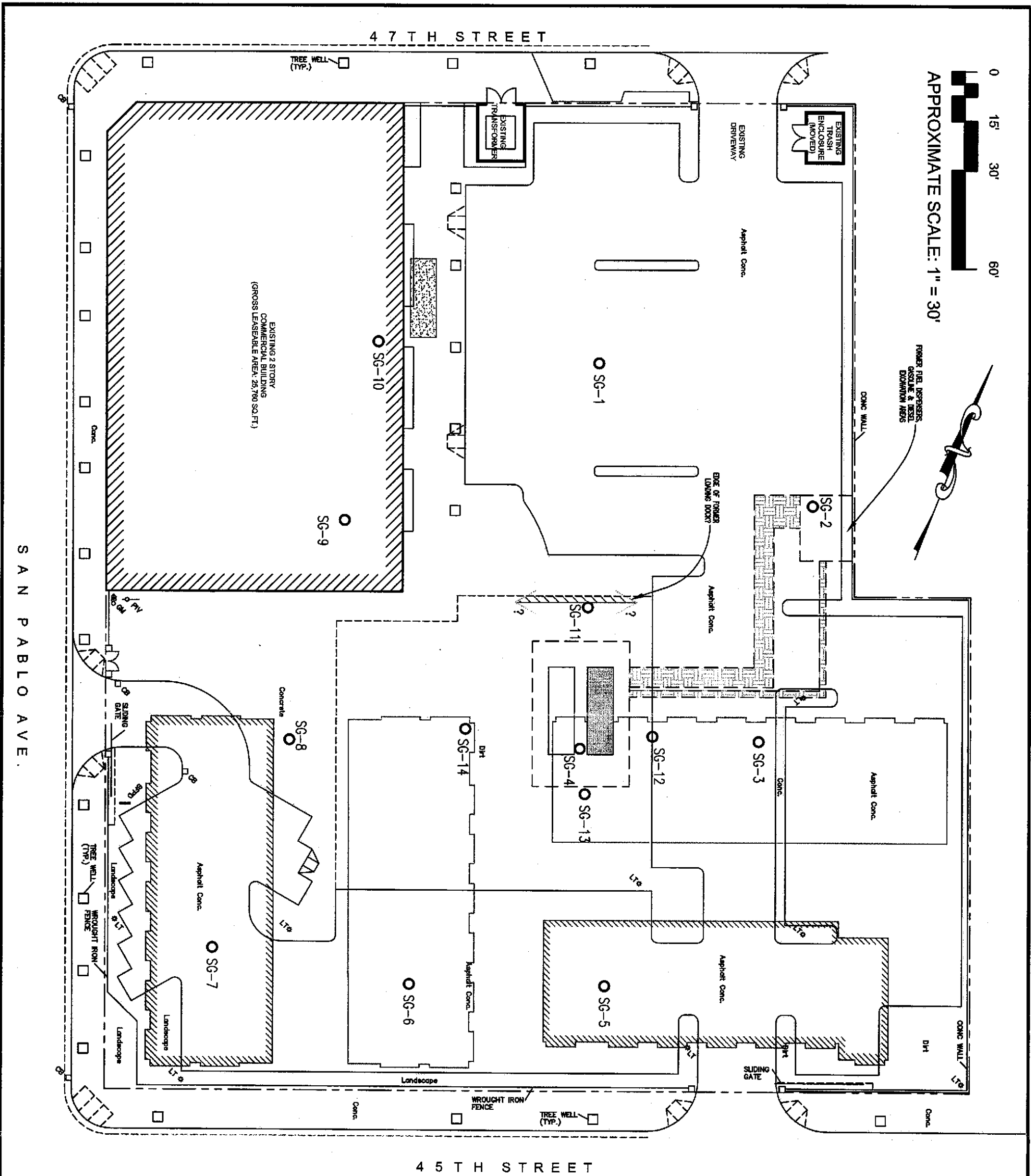
Figure No:

1

Date: March 12, 1999

Drawn By: JG/Geo-Logic

Potentiometric Surface Map ATTACHMENT 2



0 15' 30' 60'

APPROXIMATE SCALE: 1" = 30'

SAN PABLO AVE.

47TH STREET

45TH STREET

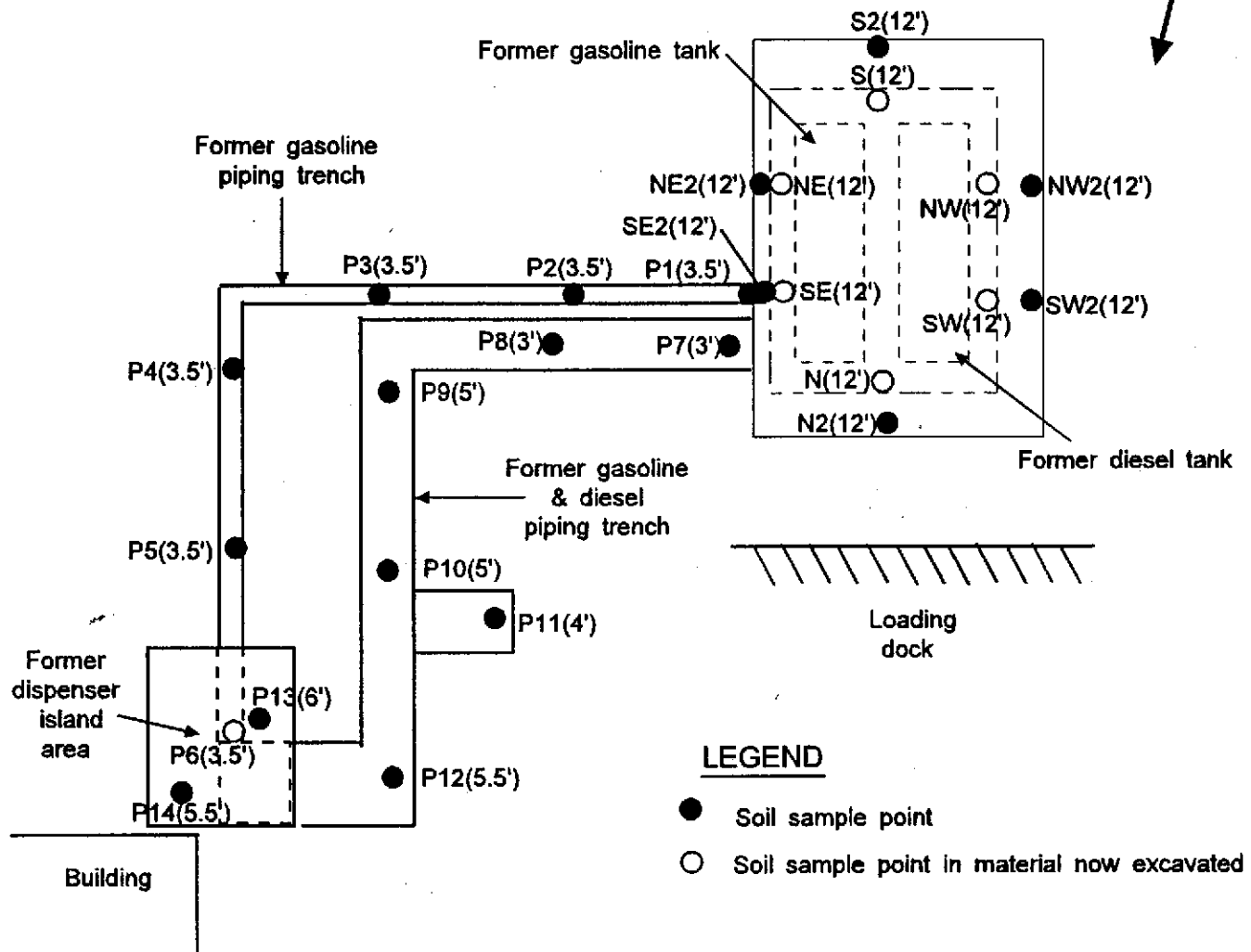
	PLANNED DEVELOPMENT:
	PROPOSED GROUND LEVEL LIVING SPACES:
	APPROXIMATE FORMER UST EXCAVATION AREA*:
	APPROXIMATE FORMER GASOLINE UST*:
	APPROXIMATE FORMER DIESEL UST*:
	APPROXIMATE FORMER PIPING TRENCH*:
	APPROXIMATE FORMER FUEL OIL UST/EXCAVATION*:
	PROPOSED SOIL-GAS SAMPLING POINT (APPROXIMATE)
	ADDITIONAL SAMPLING LOCATION REQUESTED BY ALAMEDA COUNTY ENVIRONMENTAL HEALTH

NOTES:
 * FROM FIGURES BY GEO-LOGIC, 1998-1999

SOIL-GAS SAMPLING LOCATIONS

ENVIRONMENTAL ENGINEERING CONSULTANTS 382 MARTIN AVENUE SANTA CLARA, CALIFORNIA 95050-3112 TEL: 408.327.5700 FAX: 408.327.5707	PHASE II SOIL-GAS SAMPLING REPORT 4550 SAN PABLO AVE EMERYVILLE, CA	FILENAME: 2656SC01-A DATE: REV. 2, FEB. 2007 CHECKED BY: BB DRAWN: CAC	FIGURE: F-2
---	---	---	-----------------------

N



SCALE: 1" = 20'

FORMER BERKELEY FARMS DAIRY
 4550 SAN PABLO AVENUE
 EMERYVILLE, CALIFORNIA

Figure No:

2

Date: November 20, 1998

Drawn By: JG/Geo-Logic

Sample Location Map ATTACHMENT 3

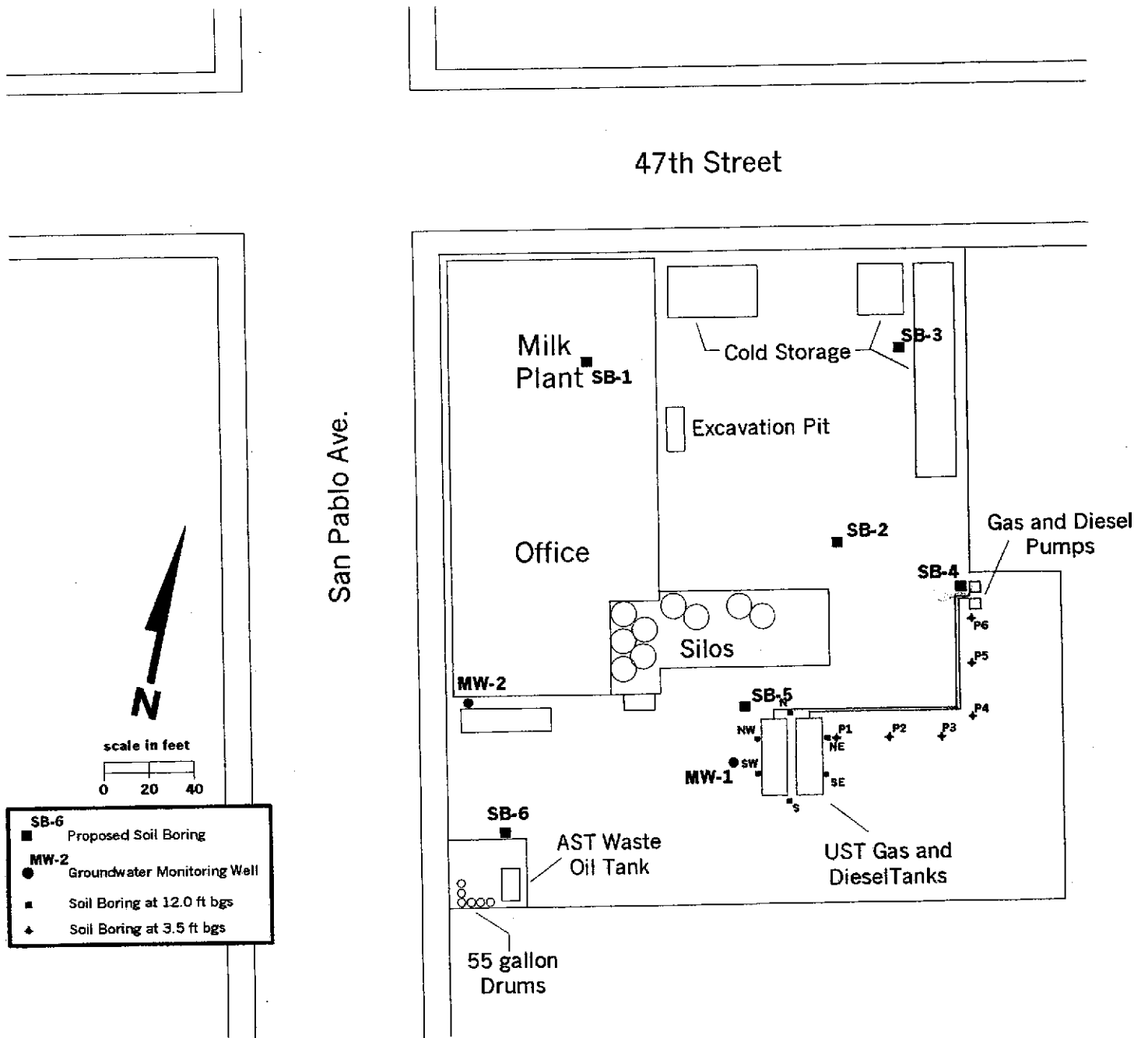
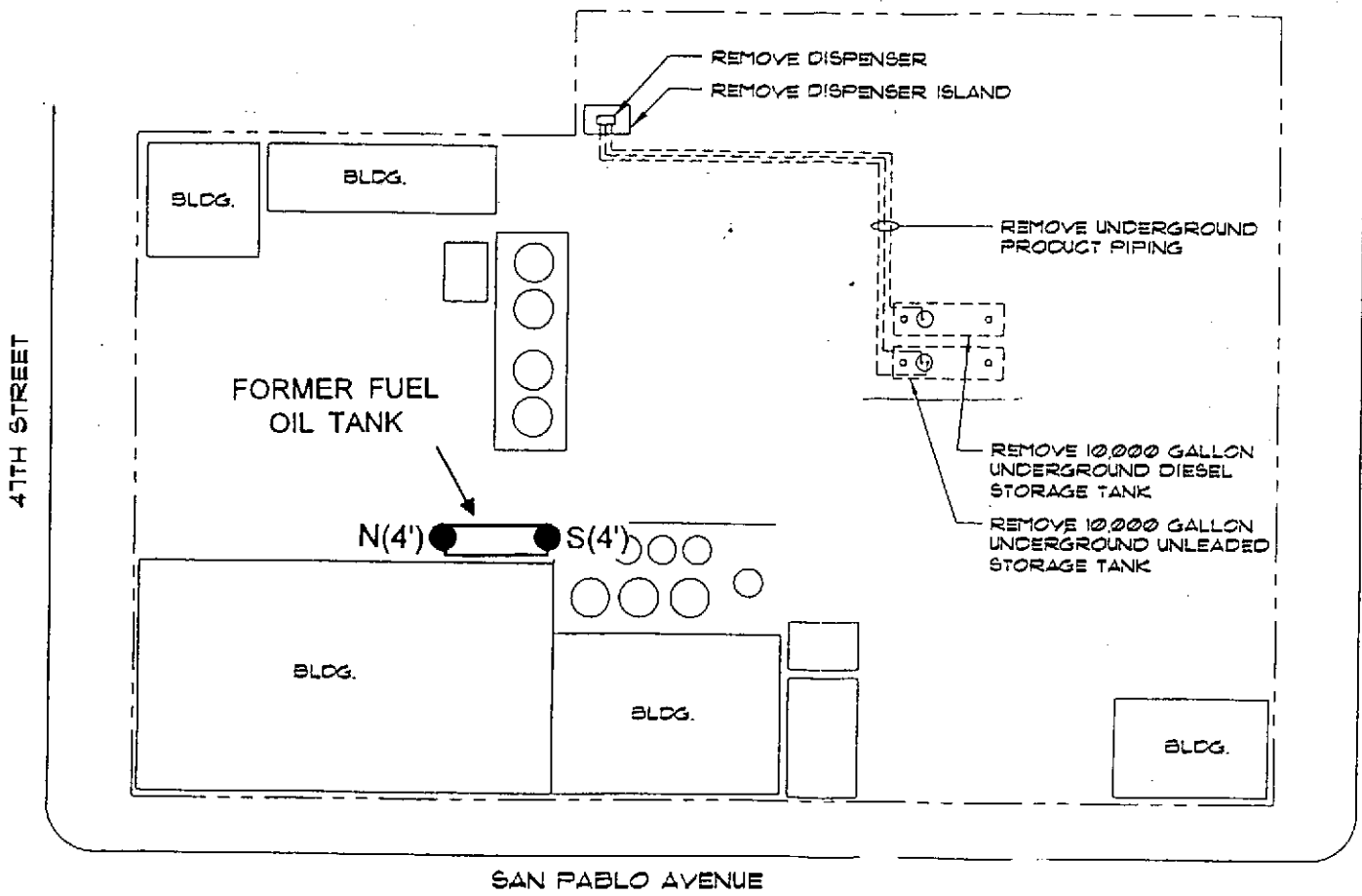


Figure 4: Location of Supplemental Soil Borings



NOT TO SCALE

FORMER BERKELEY FARMS DAIRY 4550 SAN PABLO AVENUE EMERYVILLE, CALIFORNIA	Figure No: 1	Date: March 9, 1999
		Drawn By: JG/Geo-Logic

Site Plan

**Table 1
UST Excavation Confirmatory Soil Sample Results**

Confirmatory Soil Sample Location	Sample Collection Date	Sample Depth (feet)	TRPH-g (mg/kg)	TRPH-d (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)
N	14-Sep-98	12	<0.1	290	<0.005	<0.005	<0.005	<0.005	<0.1
S	14-Sep-98	12	<0.1	6,700	<0.005	<0.005	<0.005	<0.005	<0.1
NE	14-Sep-98	12	22	72	2.1	0.77	1.3	3.7	<0.1
SE	14-Sep-98	12	<0.1	150	<0.005	<0.005	<0.005	<0.005	<0.1
SW	14-Sep-98	12	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.1
NW	14-Sep-98	12	<0.1	410	<0.005	<0.005	<0.005	<0.005	<0.1
Composite	14-Sep-98	12	<0.1	1,110	<0.005	<0.005	<0.005	<0.005	<0.1
N2	25-Sep-98	12	NS	120	NS	NS	NS	NS	NS
S2	25-Sep-98	12	NS	770	NS	NS	NS	NS	NS
NE2	25-Sep-98	12	<0.1	100	<0.005	<0.005	<0.005	<0.005	<0.005
SE2	25-Sep-98	12	NS	59	NS	NS	NS	NS	NS
NW2	25-Sep-98	12	NS	66	NS	NS	NS	NS	NS
SW2	25-Sep-98	12	NS	230	NS	NS	NS	NS	NS
P1	11-Sep-98	3.5	<0.1	NA	<0.005	<0.005	<0.005	<0.005	<0.1
P2	11-Sep-98	3.5	<0.1	NA	<0.005	<0.005	<0.005	<0.005	<0.1
P3	11-Sep-98	3.5	<0.1	NA	<0.005	<0.005	<0.005	<0.005	<0.1
P4	11-Sep-98	3.5	<0.1	NA	<0.005	<0.005	<0.005	<0.005	<0.1
P5	11-Sep-98	3.5	<0.1	NA	<0.005	<0.005	<0.005	<0.005	<0.1
P6	11-Sep-98	3.5	<0.1	NA	<0.005	<0.005	<0.005	<0.005	<0.1
P7	5-Oct-98	3	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
P8	5-Oct-98	3	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
P9	5-Oct-98	5	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
P10	5-Oct-98	5	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
P11	5-Oct-98	4	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
P12	5-Oct-98	5.5	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
P13	5-Oct-98	6	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
P14	5-Oct-98	5.5	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005

NS Not Sampled

NA Not Analyzed

Geo-Logic
Paradiso Job No. 1011
March 10, 1999

TABLE 1
SUMMARY OF LABORATORY ANALYSES
SOIL

<u>Sample/depth</u>	<u>TPH as Fuel Oil</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Xylenes</u>	<u>MTBE</u>
	(Collected on February 4, 1999)					
N (4')	<0.1	<0.005	<0.005	<0.005	<0.005	<0.1
S (4')	<0.1	<0.005	<0.005	<0.005	<0.005	<0.1
	(Collected on January 26, 1999)					
Comp S1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.1
Method Blank/ Detection Limit	<0.1	<0.005	<0.005	<0.005	<0.005	<0.1

Results are in milligrams per kilogram (mg/kg).

Geo-Logic
Paradiso Job No. 1011
March 18, 1999

TABLE 3

SUMMARY OF LABORATORY ANALYSES
SOIL

(Samples collected on February 26, 1999)

<u>Sample No./Depth</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Xylenes</u>	<u>MTBE</u>
MW1 (10')	1,300	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
MW1 (12')	97	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
MW2 (12')	<0.1	1.7	0.049	0.026	0.047	0.076	<0.005
MW2 (13')	<0.1	0.28	<0.005	0.058	0.092	0.081	<0.005
Comp S1 *	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005
Method Blank/ Det. Limit	0.1	0.1	0.005	0.005	0.005	0.005	0.005

* Total Lead was detected at a concentration of 29 ppm.

Results are in parts per million.

**Table 3
Summary of Soil Analytical Results**

Analyte/Method	Number of Samples	Number of Detections	Maximum Reported Concentration	Sample Location	Sample Depth (feet bgs)
BTEX (Method 8020)	6	0	N.D. (<0.005 mg/kg)		
TRPH-g (Method 8015M)	12	0	N.D. (<0.05 mg/kg)		
TRPH-d (Method 8015M)	12	4	1,976 mg/kg	SB-4	5
VOCs (Method 8260)	6	0	N.D. (<0.5 µg/kg)		
SVOCs (Method 8270) Phenol	6	3	0.34 mg/kg	SB-2	0.5
Ammonia (Method 350.3)	4	0	N.D. (<1 mg/kg)		
Nirite as N (Method 354.1)	4	0	N.D. (<1 mg/kg)		
Nitrate as N (Method 300)	4	0	N.D. (<1 mg/kg)		
PCBs (Method 8080)	1	0	N.D. (<0.02 mg/kg)		
Metals (Method 6010)					
Arsenic	6	0	N.D. (<5 mg/kg)		
Barium	6	6	170 mg/kg	SB-2	0.5
Beryllium	6	0	N.D. (< 1 mg/kg)		
Cadmium	6	0	N.D. (< 1 mg/kg)		
Cobalt	6	6	13 mg/kg	SB-1,-2	0.5
Chromium (III)	6	6	31 mg/kg	SB-1,-2	0.5
Copper	6	6	38 mg/kg	SB-2	0.5
Mercury	6	2	0.42 mg/kg	SB-4	0.5
Molybdenum	6	0	N.D. (< 1 mg/kg)		
Nickel	6	6	48 mg/kg	SB-1	0.5
Lead	6	6	110	SB-3	0.5
Antimony	6	0	N.D. (< 5 mg/kg)		
Selenium	6	0	N.D. (<5 mg/kg)		
Thallium	6	3	7.5 mg/kg	SB-4	0.5
Vanadium	6	6	37 mg/kg	SB-6	0.5
Zinc	6	6	60 mg/kg	SB-3	0.5

Table 4
Comparison of Site Metals to Background

Detected Metals	Range of Reported Concentrations (mg/kg)	Range of Background Concentrations in California Soils ¹ (mg/kg)	Is The Detected Metal Within Background?
Antimony	< 5.0	0.15 - 1.95	Yes ²
Arsenic	< 5.0	0.6 - 11	Yes
Barium	91 - 170	133 - 1,400	Yes
Beryllium	< 1.0	0.25 - 2.7	Yes
Cadmium	< 1.0	0.05 - 1.7	Yes
Chromium	5.5 - 31	23 - 1,579	Yes
Cobalt	6.9 - 13	2.7 - 46.9	Yes
Copper	16 - 38	9.1 - 96.4	Yes
Lead	6.5 - 110	12.4 - 97.1	No
Mercury	< 0.06 - 0.42	0.1 - 0.9	Yes
Molybdenum	< 1.0	0.1 - 9.6	Yes
Nickel	19 - 48	9 - 509	Yes
Selenium	< 5.0	0.015 - 0.43	Yes ²
Silver	< 1.0	0.1 - 8.3	Yes
Thallium	< 5.0 - 7.5	0.17 - 1.10	No
Vanadium	14 - 37	39 - 288	Yes
Zinc	39 - 60	88 - 236	Yes

¹ Bradford, G.R. et al. Background Concentrations of Trace and Major Elements in California Soils. University of California, Riverside.

² Even though the detection limit is outside the range of background, this metal is an uncommon site contaminant, is not associated with any site uses and would most likely be naturally occurring.

Table 5
Groundwater Analytical Results

Analyte/Method	Sampled 08-Dec-99		Sampled 13-Jan-00	
	Reported Concentration MW-1 (µg/L)	Reported Concentration MW-2 (µg/L)	Reported Concentration MW-1 (µg/L)	Reported Concentration MW-2 (µg/L)
BTEX (Method 8020) Xylene, total	N.D. (< 0.5)	25.9	N.D. (< 5.0)	N.D. (< 5.0)
TRPH-g (Method 8015M)	N.D. (< 50))	130	N.D. (< 50)	N.D. (< 50)
TRPH-d (Method 8015M)	219,200	N.D. (< 100)	NA	NA
VOCs (Method 8260) 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Xylenes, total	N.D. (<0.5)	2.18 2.03 22.4	NA	NA
SVOCs (Method 8270) Bis(2-ethylhexy)phthalate Fluorene Phenanthrene Pyrene	27 12 13 5.5	N.D. (< 2.0)	NA	NA

NA Not Analyzed

Table 4
Historical Groundwater Analytical Data
4550 San Pablo Avenue, Emeryville, CA

Well	Date	TPH-g (µg/L)	TPH-d (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylene (µg/L)	MTBE (µg/L)
<i>On-site Wells</i>								
MW-1	12/13/00	1,275	8,450	42.4	132	40	199	70
	9/19/00	< 50	43,100	6.5	9.1	< 0.5	23	180
	4/6/00	680	25,000	< 0.5	< 0.5	< 0.5	0.65	47
MW-2	12/13/00	322	188	9.63	32.7	12.1	58.4	< 5
	9/19/00	< 50	90	< 0.5	1.9	4.9	12	< 5
	4/6/00	< 50	150	< 0.5	1.1	< 0.5	3.9	15
<i>Off-site Wells</i>								
MW-1A	12/13/00	1,400	250	96	12	< 0.5	10	170
	9/19/00	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	13
MW-2	12/13/00	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5
	9/19/00	2,000	330	210	8.7	5.5	6	180
MW-3	12/13/00	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	9.3
	9/19/00	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5

Geo-Logic
Paradiso Job No. 1011
March 18, 1999

TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

<u>Sample Number</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>MTBE</u>
(Samples collected on March 4, 1998)							
MW1 -Dairy	447,000	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5
MW2 -Dairy	16,000	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5
Method Blank/ Det. Limit	5.0	5.0	0.5	0.5	0.5	0.5	0.5

Results are in parts per billion.

BORING LOG

Project No. 1011	Boring and casing diameter: 8", 2"	Logged By: JG
Project: Former Berkeley Farms Dairy	Well Cover Elevation: 43.27	Date drilled: 2/26/99
Boring No. MW-1-Dairy	Drilling Method: Hollow Stem Auger	Drilling Company: Woodward Drilling

Penetration Blows/6" PID	G.W. level	Sample Depth (ft)	Stratigraphy (USCS)	Description
		0		8" of concrete pavement over 4" of sand and gravel base.
3/6/12/15	PID-0 	5	CL	@1' - Silty clay (CL), black (5Y 2.5/2), moist, very stiff. @5' - Silty clay (CL), very dark gray (5Y 3/1), moist, very stiff, estimated 10% subangular gravels to 1/4" diameter. @7' - As above except gray (5Y 5/1), very moist, very stiff, slight odor of hydrocarbons.
5/6/10/14		10	ML	@9' - Clayey silt with gravel (ML), dark greenish gray (5G 4/1), wet, estimated 15-30% variable gravel content, mod. odor of hydrocarbons.
9/14/14/15		11	GW	@11' - Sandy gravel, dk. greenish gray (5G 4/1), saturated, v. stiff, v. fine to med.-grained, angular gravels to 1/2" est. 10% silt, str. odor.
15/15/8/11		12.4	ML	@12.4' - Sandy silt (ML), yellowish brown (10YR 5/4), saturated, slight odor of hydrocarbons.
18/26/50-6"		16	ML	@16' - Sandy silt, as above except very hard.
16/20/20/36		20		@20' - Clayey silt with gravel (ML), yellowish brown (10YR 5/4), saturated, hard, up to 15% variable subangular gravels to 3/8" diameter, trace to 10% v. fine-grained sand, sl. of hydrocarbons.
		25		Total Depth: 22 feet Screen: 0.010 slot from 6-22 feet Sandpack: #2/12 sand from 5-22 feet Seal: Bentonite 3,5-5 feet, neat cement grout 0-3.5 feet.
		30		


Former Berkeley Farms Dairy 4550 San Pablo Avenue Emeryville, California	MW1 -Dairy	Date: March 12, 1999 Drawn By: JG/Geo-Logic
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Boring Log and Well Completion Details

ATTACHMENT 6

BORING LOG

Project No. 1011	Boring and casing diameter: 8", 2"	Logged By: JG
Project: Former Berkeley Farms Dairy	Well Cover Elevation: 42.43	Date drilled: 2/26/99
Boring No. MW-2-Dairy	Drilling Method: Hollow Stem Auger	Drilling Company: Woodward Drilling

Penetration Blows/6" PID	G.W. level	Sample Depth (ft)	Stratigraphy (USCS)	Description
		0		8" of concrete pavement over 4" of sand and gravel base.
		1	CL	@1' - Silty clay (CL), black (5Y 2.5/2), moist, very stiff.
5/6/10/12	PID-0	5		@ 5' - Clayey silt (ML), dark olive gray (5Y 3/2), moist, very stiff, trace angular gravels to 3/8" diameter.
10/14/15/15		10	ML	@ 10' - Clayey silt with gravel (ML), olive gray (5Y 5/3), very moist, very stiff, estimated 15-25% variable gravel content, gravels are angular, to 1.5" diameter.
13/6/15/20		15		@ 11.5' - Sandy silt (ML), yellowish brown (10YR 5/4), v. moist, v. stiff. @ 13' - Silt (ML), light olive gray (5Y 6/2), saturated, very stiff, locally with up to 15% angular gravels to 1/2" diameter, locally clayey to sandy. Abundant FeO staining.
		20	SM ML	@ 20' - Silty sand with gravel, weak red (2.5Y 4/2), saturated, medium dense, sand very fine to coarse-grained, 15% subangular gravels to 1/4" diameter, 10-15% silt and clay. @ 20.5' - Clayey silt (ML), olive gray (5Y 5/3), saturated, hard, trace angular gravels to 1/8" diameter, abundant Feo and MnO staining.
8/12/19/22		25		Total Depth: 22 feet Screen: 0.010 slot from 6-22 feet Sandpack: #2/12 sand from 5-22 feet Seal: Bentonite 3,5-5 feet, neat cement grout 0-3.5 feet.
		30		

Former Berkeley Farms Dairy 4550 San Pablo Avenue Emeryville, California	MW2 -Dairy	Date: March 12, 1999 Drawn By: JG/Geo-Logic
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Boring Log and Well Completion Details



E2C, Inc. Project # 2656SC01-A
 4550 San Pablo Avenue, Emeryville, California

TEG Project #70117D

EPA Method 8260B VOC Analyses of SOIL VAPOR in ug/L of Vapor

SAMPLE NUMBER:	Probe Blank	Probe Blank	SG-1	SG-2	SG-3	SG-4	SG-4	
SAMPLE DEPTH (feet):			5.0	5.0	5.0	5.0	5.0	
PURGE VOLUME:			3	3	3	1	3	
COLLECTION DATE:	1/17/07	1/18/07	1/17/07	1/17/07	1/17/07	1/17/07	1/17/07	
COLLECTION TIME:	09:30	09:15	14:29	12:05	12:19	10:06	10:26	
DILUTION FACTOR (VOCs):	RL	1	1	1	1	1	1	
Vinyl Chloride	0.030	nd	nd	nd	nd	nd	nd	
trans-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd	nd	
cis-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd	nd	
Carbon Tetrachloride	0.055	nd	nd	nd	nd	nd	nd	
Benzene	0.080	nd	nd	nd	nd	nd	nd	
Trichloroethene	0.10	nd	nd	nd	nd	nd	nd	
Toluene	0.20	nd	nd	nd	nd	nd	nd	
Tetrachloroethene	0.10	nd	nd	nd	nd	nd	nd	
Ethylbenzene	0.10	nd	nd	nd	nd	nd	nd	
m,p-Xylene	0.20	nd	nd	nd	nd	nd	nd	
o-Xylene	0.10	nd	nd	nd	nd	nd	nd	
1,1 Difluoroethane (leak check)	10	nd	nd	nd	nd	nd	nd	
Surrogate Recovery (DBFM)		103%	104%	100%	104%	99%	101%	103%
Surrogate Recovery (1,2-DCA-d4)		105%	112%	104%	106%	104%	105%	104%
Surrogate Recovery (Toluene-d8)		100%	101%	99%	99%	100%	99%	98%

'RL' Indicates reporting limit at a dilution factor of 1
 'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. John Henkelman

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E2C, Inc. Project # 2656SC01-A
 4550 San Pablo Avenue, Emeryville, California

TEG Project #70117D

EPA Method 8260B VOC Analyses of SOIL VAPOR in ug/L of Vapor

SAMPLE NUMBER:		SG-4	SG-5	SG-6	SG-7	SG-8	SG-8	SG-9
SAMPLE DEPTH (feet):		5.0	5.0	5.0	5.0	5.0	dup 5.0	1.5
PURGE VOLUME:		7	3	3	3	3	3	3
COLLECTION DATE:		1/17/07	1/17/07	1/17/07	1/17/07	1/18/07	1/18/07	1/18/07
COLLECTION TIME:		10:47	12:39	13:42	14:01	10:58	11:58	10:20
DILUTION FACTOR (VOCs):	RL	1	1	1	1	1	1	1
Vinyl Chloride	0.030	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.055	nd	nd	nd	nd	nd	nd	nd
Benzene	0.080	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	0.10	nd	nd	nd	nd	nd	nd	nd
Toluene	0.20	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	0.10	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.10	nd	nd	nd	nd	nd	nd	nd
m,p-Xylene	0.20	nd	nd	nd	nd	nd	nd	nd
o-Xylene	0.10	nd	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10	nd	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		107%	99%	105%	105%	107%	107%	104%
Surrogate Recovery (1,2-DCA-d4)		108%	103%	103%	107%	115%	112%	118%
Surrogate Recovery (Toluene-d8)		102%	96%	100%	99%	100%	101%	100%

'RL' Indicates reporting limit at a dilution factor of 1
 'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. John Henkelman

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E2C, Inc. Project # 2656SC01-A
 4550 San Pablo Avenue, Emeryville, California

TEG Project #70117D

EPA Method 8260B VOC Analyses of SOIL VAPOR in ug/L of Vapor

SAMPLE NUMBER:		SG-10	SG-11	SG-12	SG-13	SG-13	SG-14
SAMPLE DEPTH (feet):		1.5	5.0	5.0	5.0	dup 5.0	5.0
PURGE VOLUME:		3	3	3	3	3	3
COLLECTION DATE:		1/18/07	1/18/07	1/17/07	1/17/07	1/17/07	1/18/07
COLLECTION TIME:		10:40	11:42	11:18	11:04	11:38	11:15
DILUTION FACTOR (VOCs):	RL	1	1	1	1	1	1
Vinyl Chloride	0.030	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.055	nd	nd	nd	nd	nd	nd
Benzene	0.080	nd	nd	nd	nd	nd	nd
Trichloroethene	0.10	nd	nd	nd	nd	nd	nd
Toluene	0.20	nd	nd	nd	nd	nd	nd
Tetrachloroethene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.10	nd	nd	nd	nd	nd	nd
m,p-Xylene	0.20	nd	nd	nd	nd	nd	nd
o-Xylene	0.10	nd	nd	nd	nd	nd	nd
1,1 Difluoroethane (leak check)	10	nd	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		104%	110%	103%	104%	106%	104%
Surrogate Recovery (1,2-DCA-d4)		110%	113%	103%	109%	106%	111%
Surrogate Recovery (Toluene-d8)		97%	100%	97%	97%	99%	98%

'RL' Indicates reporting limit at a dilution factor of 1
 'nd' Indicates not detected at listed reporting limits

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. John Henkelman

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